

**IN THE DISTRICT COURT OF THE UNITED STATES  
FOR THE WESTERN DISTRICT OF NORTH CAROLINA  
CHARLOTTE DIVISION**

**CIVIL CASE NO. 3:06cv405**

**NEW PRODUCTS MARKETING** )  
**CORP. d/b/a Stringliner Company,** )  
 )  
                  **Plaintiff,** )  
 )  
                  **vs.** )  
 )  
**LOWE’S HOME CENTERS, INC.,** )  
 )  
                  **Defendant.** )  
\_\_\_\_\_ )

**MEMORANDUM OF  
DECISION AND ORDER**

**THIS MATTER** is before the Court on the parties’ respective motions for the construction of certain claim language used in U.S. Patent No. 5,927,635 (“the ‘635 Patent”).

**I. PROCEDURAL HISTORY**

In April 2006, the Plaintiff New Products Marketing Corp. d/b/a Stringliner Company (“Stringliner”) brought this action against Lowe’s Companies, Inc. for patent infringement, trademark infringement, and unfair competition in the United States District Court for the District of

North Dakota. [Doc. 1-2]. The docket sheet from the District of North Dakota [Doc. 1-6] reflects that Stringliner amended its Complaint in May 2006 to add Lowe's Home Centers, Inc. ("LHC") and Does 1-10 as Defendants to this action, but this Amended Complaint has not been made part of the record before this Court. The District of North Dakota docket sheet further reflects that in August 2006, Lowe's Companies, Inc. was dismissed upon stipulation of the parties.<sup>1</sup> On September 21, 2006, the District Court for the District of North Dakota granted LHC's motion to transfer this action to this District. [Doc. 1-1].

In October 2006, LHC filed its answer and counterclaim, seeking a declaratory judgment to the effect that LHC has not infringed any patent and/or trademark rights of Stringliner and that LHC has not engaged in unfair competition. [Doc. 2]. The Court entered a Pretrial Order and Case Management Plan in January 2007. [Doc. 13].

In September 2007, this matter was reassigned to the undersigned. The Court subsequently entered a revised Pretrial Order and Case

---

<sup>1</sup>While the District of North Dakota docket sheet indicates that Stringliner amended its Complaint to add Does 1-10 as defendants, the pleadings filed by both sides since the transfer of this action reflect only LHC as a Defendant. Additionally, it appears that Stringliner has made no attempt to serve or even identify these Doe Defendants. The Court therefore concludes that Stringliner has abandoned its claims against these fictional defendants.

Management Plan, extending the previously set scheduling deadlines. [Doc. 20]. Upon joint motion of the parties, and based upon the parties' report of the Rule 26(f) Attorneys' Conference, the Court entered a Revised and Restated Pretrial Order and Case Management Plan on November 28, 2007, extending certain scheduling deadlines and establishing a Markman<sup>2</sup> proceeding schedule. [Doc. 22]. The Court specifically stated in this Order that "[a] Markman hearing will not be conducted unless the Court deems it necessary." [Doc. 22 at 8 (footnote omitted)].

The parties now have filed their respective motions for claim construction and responsive briefs. [Docs. 34-39, 42, 43]. A review of the parties' briefs reveals that the parties have done little to simplify the task facing the Court. The parties have not agreed on the precise claim terms to be construed. [Doc. 36-7; Doc. 39-13]. Even where the terms submitted by the parties overlap, there are differences between the scope of the terms to be defined. For example, in Claim 14, the Plaintiff seeks construction of the term "resiliently bendable barbs," while the Defendant seeks construction of the phrase "resiliently bendable barbs on the shank

---

<sup>2</sup>Markman v. Westview Instruments, Inc., 517 U.S. 370, 116 S.Ct. 1384, 134 L.Ed.2d 577 (1996).

that extend radially outward from the shank to engage the inside surface of the spool.” [Doc. 36-7 at 5; Doc. 39-13 at 26]. Compounding this problem is the manner in which the parties chose to brief the issue of claim construction. The Plaintiff addresses each of the 19 claim terms it seeks to have construed, but relies in each instance on the “ordinary and customary meaning” of the term. With the exception of occasional references to the illustrations of the preferred and alternate embodiments of the ‘635 Patent (Figures 1-8), Plaintiff cites nothing in the claim language, the specification or the prosecution history to support these proposed “ordinary and customary meanings.” It is true that the Court is obligated to give disputed claim terms “their ordinary and accustomed meaning as understood by one of ordinary skill in the art.” Bell Atlantic Network Services, Inc. v. Covad Communications Group, Inc., 262 F.3d 1258, 1267 (Fed. Cir. 2001). A person of ordinary skill in the art, however, is deemed to read the claim terms in the context of the entire patent, including the language of the particular claims in which the disputed terms appear, the specification, and the prosecution history. Phillips v. AWH Corp., 415 F.3d 1303, 1313 (Fed. Cir. 2005), cert. denied, 546 U.S. 1170, 126 S.Ct. 1332, 164 L.Ed.2d 49 (2006). The lack of citation by the Plaintiff to anything in the intrinsic

evidence proves to be a hindrance to the Court in finding support for the Plaintiff's proposed "ordinary and customary meaning" of the disputed claim terms.

Defendant's claim construction brief is also problematic, although for a different reason. While the Defendant has identified 20 claim terms for construction, its opening brief discusses only seven of these terms. With regard to the remaining limitations, the Defendant simply refers the Court to its claim construction chart, a 31-page document which is attached to its brief as Exhibit K. [Doc. 39-13]. The Defendant's brief in response to the Plaintiff's opening brief addresses only a few of the terms identified by the Plaintiff. [Doc. 42]. It is unclear to the Court why the Defendant chose to address only some of the disputed claim terms in its briefs. It may be simply that the Defendant ran out of space; if that were the case, however, the Defendant certainly could have moved for an extension of the page limitation. The Defendant also could have shortened or even eliminated its extensive discussion (over ten pages) of the patent's history, including several illustrations of prior art, and of the law pertaining to claim construction in order to dedicate more space to the actual construction of the disputed claims. The Defendant, however, chose to do none of these

things and instead abruptly ended its brief with a cursory reference to its claim construction chart and a request that the Court adopt the proposed construction of claim terms therein. The Defendant's claim construction chart, while extremely lengthy and extremely detailed in citations to the patent claim language and specification, cites no legal authority and contains no argument or discussion as to why the Court should adopt the Defendant's proposed construction over the Plaintiff's. As such, the Defendant's claim construction chart, without more, provides little guidance to the Court as it attempts to construe the claims at issue. Moreover, having failed to brief properly the claim terms which it contends are in dispute, the Defendant effectively has deprived the Plaintiff of an opportunity to respond to the Defendant's proposed construction of these claim terms.

In light of these circumstances, the Court considered conducting a Markman hearing so that the parties may be heard as to all of the claim terms that require construction. The parties have indicated to the Court, however, that they prefer not to have a Markman hearing in this case. Thus, despite the little guidance provided by the parties in their briefs, the Court will proceed to construe the claim terms at issue based on the record

before the Court.<sup>3</sup> In so doing, the Court will limit its analysis to those terms that have been identified as disputed claim terms in the parties' briefs.

## II. FACTUAL BACKGROUND

The patent at issue relates to a construction line reel on which a disposable spool of wound construction line can be mounted and used repeatedly, and when the line is expended, the reel can be re-used with a replacement spool of line. '635 Patent, Col. 1, lines 13-18.

As the inventors explain in the '635 Patent, long lengths of heavy string, known as construction line, are frequently used on construction sites to establish straight lines for the purpose of measurements or aligning structural elements during the construction process. Id. at Col. 1, lines 21-27. Because these tasks are often done at great heights or in other dangerous conditions, it is desirable that the reel be capable of being held and used with just one hand. Id. at Col. 1, lines 33-41. Because

---

<sup>3</sup>The Federal Circuit does not require courts to hold evidentiary hearings on claim construction issues. See J.G. Peta, Inc. v. Club Protector, Inc., Nos. 02-1127, 02-1128, 65 Fed. Appx. 724, 727, 2003 WL 21206079, at \*3 n.2 (Fed. Cir. May 20, 2003). As the Federal Circuit has noted, "Markman does not require a district court to follow any particular procedure in conducting claim construction." Ballard Med. Products v. Allegiance Healthcare Corp., 268 F.3d 1352, 1358 (Fed. Cir. 2001).

construction line is typically purchased pre-wound on a spool, prior construction line reels required unwinding the line off the spool and winding it onto the construction line reel. Id. at Col.1, lines 52-55. The inventors' own prior invention, described in U.S. Patent No. 5,664,739, allowed for a conventional spool of construction line to be fitted with a rotatable handle, thereby eliminating the need to unwind the line from the spool and wind it on to the reel. Id. at Col. 1, l. 65 to Col. 2, l. 3. This prior invention, however, lacked a shaft that extended all the way through the spool, which resulted in the end cap rotating in relation to the midsection of the reel. Id. at Col. 2, lines 9-15. The inventors also noted that their prior invention was "too flimsy" and made detaching a partially used spool difficult without destroying the spool itself. Id. at Col. 2, lines 16-19. In light of these deficiencies, the inventors of the present invention sought to create "an apparatus useable for outfitting a spool of construction line with a rotatable handle and line retaining shoulders." Id. at Col. 2, lines 28-31.

### **III. PRINCIPLES OF CLAIM CONSTRUCTION**

"The determination of infringement is a two-step process. First, the court construes the claims to correctly determine the scope of the claims.



Second, it compares the properly construed claims to the accused device.” Bell Atlantic, 262 F.3d at 1267. The first step in this process, the construction of claims, is a question of law for the Court. Markman, 517 U.S. at 372, 116 S.Ct. at 1387; Cybor Corp. v. FAS Techs., Inc., 138 F.3d 1448, 1456 (Fed. Cir. 1998) (en banc). The second step, the comparison of the properly construed claims to the accused device, is typically a question of fact for the jury. See Bell Atlantic, 262 F.3d at 1267.

“It is well-settled that, in interpreting an asserted claim, the court should look first to the intrinsic evidence of record, i.e., the patent itself, including the claims, the specification and, if in evidence, the prosecution history. Such intrinsic evidence is the most significant source of the legally operative meaning of disputed claim language.” Vitronics Corp. v. Conceptiontronic, Inc., 90 F.3d 1576, 1582 (Fed. Cir. 1996) (citations omitted). The Court should give the disputed claim terms “their ordinary and accustomed meaning as understood by one of ordinary skill in the art.” Bell Atlantic, 262 F.3d at 1267. A person of ordinary skill in the art is deemed to read the claim terms not only in the context of the particular claims in which the disputed terms appear, but also in the context of the

entire patent, including the specification and the prosecution history. See Phillips, 415 F.3d at 1313.

The claims of the patent “themselves provide substantial guidance as to the meaning of particular terms.” Phillips, 415 F.3d at 1314.

Specifically, the context in which a term is used within the claim, as well as the usage of that term in other claims of the patent, can be valuable in ascertaining the meaning of a particular claim term. Id. Of course, the claims of the patent cannot be viewed in a vacuum. “Rather, [the Court] must look at the ordinary meaning in the context of the written description and the prosecution history.” Medrad, Inc. v. MRI Devices Corp., 401 F.3d 1313, 1319 (Fed. Cir. 2005).

The specification of the patent can be highly instructive in construing the patent claims. As the Federal Circuit has noted, the specification “is always highly relevant to the claim construction analysis.” Vitronics, 90 F.3d at 1582. In fact, the specification is usually dispositive, as “it is the single best guide to the meaning of a disputed term.” Id.; Standard Oil Co. v. Am. Cyanamid Co., 774 F.2d 448, 452 (Fed. Cir. 1985) (“The specification is ... the primary basis for construing the claims.”). As such, the Federal Circuit has stated that it is “entirely appropriate for a court,

when conducting claim construction, to rely heavily on the written description for guidance as to the meaning of the claims.” Phillips, 415 F.3d at 1317. In some cases, the inventor may provide within the specification a special definition of a claim term which differs from the term’s usual meaning. “In such cases, the inventor’s lexicography governs.” Id. at 1316. The inventor also may disclaim or disavow claim scope within the specification. Where “the inventor has dictated the correct claim scope, ... the inventor’s intention, as expressed in the specification, is regarded as dispositive.” Id.

In addition to consulting the specification, the Court also may examine the patent’s prosecution history in construing the terms of the claims. Markman v. Westview Instruments, Inc., 52 F.3d 967, 980 (Fed. Cir. 1995), aff’d, 517 U.S. 370, 116 S.Ct. 1384, 134 L.Ed.2d 577 (1996). “Like the specification, the prosecution history provides evidence of how the PTO and the inventor understood the patent.” Phillips, 415 F.3d at 1317. The prosecution history also may be helpful in determining whether the inventor disclaimed any particular interpretation during the prosecution of the patent. See Chimie v. PPG Industries, Inc., 402 F.2d 1371, 1384 (Fed. Cir. 2005). While it can be helpful in some respects, the prosecution

history “often lacks the clarity of the specification and thus is less useful for claim construction purposes.” Phillips, 415 F.3d at 1317.

In addition to examining the intrinsic evidence, the Court is also authorized to consider certain extrinsic evidence, “including expert and inventor testimony, dictionaries, and learned treatises.” Markman, 52 F.3d at 980. While such extrinsic evidence may be useful in “shed[ding] ... light on the relevant art,” it is “less significant than the intrinsic record in determining the ‘legally operative meaning of disputed claim language.’” C.R. Bard, Inc. v. U.S. Surgical Corp., 388 F.3d 858, 862 (Fed. Cir. 2004) (quoting in part Vanderlande Industries Nederland BV v. Int’l Trade Comm’n, 366 F.3d 1311, 1318 (Fed. Cir. 2004)). “In sum, extrinsic evidence may be useful to the court, but it is unlikely to result in a reliable interpretation of patent claim scope unless considered in the context of the intrinsic evidence.” Phillips, 415 F.3d at 1319.

With these principles of claim construction in mind, the Court now turns to the claims at issue in the patent-in-suit.

## IV. CLAIM CONSTRUCTION

Of the 23 claims in the '635 Patent, Stringliner has accused LHC of infringing Claims 1, 2, 10, 14, 15, and 17. Of the asserted claims, only Claim 1 is an independent claim, with the other claims depending either directly or indirectly from Claim 1.<sup>4</sup>

### A. Claim 1

Claim 1, with the disputed terms highlighted in bold, reads as follows:

**1. Rotatable reel and handle apparatus**  
for outfitting a roll of construction line with a **reel**  
and handle to facilitate unwinding and winding the  
construction line from and back onto the roll,  
wherein the **roll of construction line** is wound onto  
an **elongated, hollow, cylindrical spool** that has a  
longitudinal axis, a first end, a second end, and a  
hole extending axially along the longitudinal axis  
from the first end to the second end, said rotatable  
handle and reel apparatus being characterized by a  
**first shoulder and a second shoulder adapted to  
be positioned on opposite sides of the roll of  
construction line adjacent the respective first  
end and second end of the spool and connected  
together in non-rotational relationship to each  
other and to the spool by an elongated shank**  
that, when assembled with the roll of construction  
line and spool, extends axially through the **hole in  
the spool** and **frictionally engages** the spool, and

---

<sup>4</sup>Dependent claims include all of the limitations of the independent claim plus the additional limitations added in the respective dependent claim. See 35 U.S.C. §112 (“A claim in dependent form shall be construed to incorporate by reference all the limitations of the claims to which it refers.”).

an **elongated handle** extending axially outward from either the first shoulder or the second shoulder in a direction opposite from the spool and which is mounted to rotate in relation to the shank, the first shoulder, and the second shoulder about an axis that is axially aligned with the longitudinal axis of the spool, whereby the roll of construction line on the spool, when outfitted with the rotatable reel and handle apparatus, can be held in one hand by a user grasping the handle and **the construction line can be unwound from the roll or wound back onto the same roll between the first shoulder and the second shoulder** without releasing the user's grasp on the handle by spinning the roll, spool, and shoulders in relation to the handle.

'635 Patent, Col. 9, lines 11-41 (emphasis added).

#### 1. “Rotatable reel and handle apparatus” and “reel”

LHC contends that the term “rotatable reel and handle apparatus,” contained in the preamble of Claim 1 (and repeated in the preamble of each of the disputed claims thereafter) should be construed as being characterized by the combination of a rotatable handle, an elongated shank, and a pair of shoulders, as those terms are defined in the '635 Patent, which are assembled in the specific manner described in Claim 1, and that the apparatus exists without, but is capable of being outfitted with, a roll of construction line wound onto a spool. [Doc. 39 at 13]. With respect to the term “reel” in particular, LHC argues that this term should be

construed as the combination of an elongated shank, first shoulder and second shoulder, as those terms are defined in the '635 Patent. [Id.].

Stringliner argues that it would be inappropriate to construe these terms because they are part of the preamble and thus merely state the purpose and the intended use of the invention and do not provide any limitations to the claim. [Doc. 43 at 2]. In the event that a construction is required, Stringliner argues that the Court should reject LHC's proposed construction and instead adopt the ordinary and customary meaning of these terms. [Id. at 5-6].

"The preamble serves to focus the reader on the invention that is being claimed." On Demand Machine Corp. v. Ingram Industries, Inc., 442 F.3d 1331, 1343 (Fed. Cir.), cert. denied, 127 S.Ct. 683, 166 L.Ed.2d 516 (2006). As a general rule, "[p]reamble language that merely states the purpose or intended use of an invention" is generally not treated as limiting the scope of the claim." Bicon, Inc. v. Straumann Co., 441 F.3d 945, 952 (Fed. Cir. 2006). In determining whether a claim is limited by its preamble language, the Court must analyze the preamble itself to ascertain whether it defines aspects of the invention, or whether it simply serves to introduce the general field of the claim. On Demand, 442 F.3d at 1343. "If the body

of the claim ‘sets out the complete invention,’ the preamble is not ordinarily treated as limiting the scope of the claim.” Bicon, 441 F.3d at 952 (quoting in part Schumer v. Lab. Computer Sys., Inc., 308 F.3d 1304, 1310 (Fed. Cir. 2002)). However, if the preamble “recites essential structure that is important to the invention” or is otherwise “necessary to give meaning to the claim,” it is regarded as limiting. Bicon, 441 F.3d at 952.

In the present case, the term “rotatable reel and handle apparatus” merely serves to describe the invention which is fully set forth in the body of the claim. See Storage Tech. Corp. v. Cisco Systems, Inc., 329 F.3d 823, 831 (Fed. Cir. 2003) (finding term “policy caching method” in the preamble was “convenient label for the invention as a whole”); IMS Tech., Inc. v. Haas Automation, Inc., 206 F.3d 1422, 1434 (Fed. Cir. 2000) (finding phrase “control apparatus” in preamble was mere descriptive term for limitations that followed), cert. denied, 530 U.S. 1299, 121 S.Ct. 24, 147 L.Ed.2d 1047 (2000). The preamble does not recite any essential structure, and the body of the claim that follows the preamble completely sets forth the invention. As such, construction of the preamble is not necessary in order to give meaning to the claim. See id. (“If the preamble adds no limitations to those in the body of the claim, the preamble is not



itself a claim limitation and is irrelevant to proper construction of the claim.”). For these reasons, the Court concludes that construction of the terms “rotatable reel and handle apparatus” and “reel” as set forth in the preamble of each of the claims at issue is unnecessary.

## **2. “roll of construction line”**

LHC argues that because one of the objects of the invention was to be able to outfit the claimed apparatus with conventional rolls of construction line, the term “roll of construction line” refers to a roll of line wound onto a spool that is elongated, hollow and circular in cross section. LHC further argues that the “roll of construction line” referenced in Claim 1 is not part of the claimed rotatable reel and handle apparatus. Accordingly, LHC proposes that the term “roll of construction line” be construed as a length of line or string wound onto a spool that is not adapted for use specifically with the claimed rotatable reel and handle apparatus, and further that the roll of construction line be construed as not being a part of the claimed rotatable reel and handle apparatus. [Doc. 39 at 15-19].

Stringliner argues that this term should be construed according to its ordinary and customary meaning. Thus, Stringliner contends that the term “roll of construction line” should be construed as “a length of string wound

into a roll.” Stringliner also argues that the term should not be construed to include a spool, as “spool” is a separate limitation of the claim. Further, it argues that the roll of construction line is a claimed feature of the reel and handle apparatus, as the roll of construction line is referenced repeatedly throughout the claim. [Doc. 35 at 13-14; Doc. 43 at 6-8].

Figure 3 of the ‘635 Patent illustrates the construction line wound into a roll. ‘635 Patent, Sheet 3, Fig. 3. This drawing indicates that the roll of construction line (Reference Numeral 205) is a distinct element from the spool (Reference Numeral 210) upon which it is wound. The written description also makes clear that the roll of construction line and the spool are two distinct elements. See id. at Col. 4, lines 55-62 (“A main handle 208 is assembled in supporting, but rotational, relation to the shoulders 202, 204, so that a user (not shown) can grip the handle 208 of this invention to hold or support the roll 205 of construction line 206 as *the roll 205 of construction line 206 ... is being unwound from, or wound onto, the spool 210 during use.*”); Col. 1, lines 14-16 (“construction line reel on which a disposable *spool holding wound construction line* can be mounted”); Col. 3, lines 27-28 (“the conventional roll of construction line is typified *by being wound onto* an elongated, hollow, cylindrical spool”) (emphasis added).

Therefore, to construe the phrase “roll of construction line” to mean a length of line or string wound onto a spool would render the term “spool” throughout the claims meaningless. “A claim construction that gives meaning to all the terms of the claim is preferred over one that does not do so.” Merck & Co. v. Teva Pharm., USA, Inc., 395 F.3d 1364, 1372 (Fed. Cir. 2005). Accordingly, the Court rejects LHC’s argument that the term “roll of construction line” must be construed as including the limitation that the line must be wound onto a spool.

The Court also rejects LHC’s contention that a “roll of construction line” should be construed to mean a roll of line wound onto a spool that is not adapted for use specifically with the claimed rotatable reel and handle apparatus. As the Court finds that the term “spool” should be construed separately from the term “roll of construction line,” it would be improper to include any limitations in relation to the spool within the construction of the phrase “roll of construction line.” Even if such limitation could be applied to the roll of construction line and not the spool, however, neither the specification nor the prosecution history indicates a clear intent on the part of the inventors to limit the use of this apparatus to rolls of construction line which are “not adapted for use specifically” with the apparatus.

The Court agrees with LHC, however, that the roll of construction line is not a “part of” the claimed rotatable reel and handle apparatus. The context in which the term “roll of construction line” is used within Claim 1 supports this conclusion. Claim 1 provides for a “[r]otatable reel and handle apparatus *for outfitting* a roll of construction line.” ‘635 Patent, Col. 9, lines 11-12. The specification also makes clear that the claimed apparatus is designed for use with a roll of construction line. See id. at Col. 2, lines 28-31 (“it is a general objection of this invention to provide apparatus *useable for outfitting* a spool of construction line”); Col. 2, lines 59-62 (“Another general objection of this invention is to provide a line reel on which spools rewound with construction line or string *can be removably mounted....*”); Col. 3, lines 22-25 (“the apparatus of the present invention includes rotatable reel and handle apparatus *for outfitting* a conventional roll of construction line”) (emphasis added).

Accordingly, the Court concludes that the term “roll of construction line” means a length of string or line wound into a roll. Further, the roll of construction line is not a part of the rotatable reel and handle apparatus.

### 3. “elongated, hollow, cylindrical spool”

Having determined that “spool” is a distinct claim term from “roll of construction line,” the Court now turns to the proper construction of the term “elongated, hollow, cylindrical spool.” LHC argues that the inventors sought to describe the “spool” as something used with a conventional roll of construction line. LHC therefore argues that the term “elongated, hollow, cylindrical spool” should be construed as a tube having a first end and a second end that is elongated, hollow and circular in cross section, as is typical of a spool used with a conventional roll of construction line. LHC further argues that the spool is not part of the claimed rotatable reel and handle apparatus. [Doc. 39 at 16-18].

Stringliner argues that LHC improperly attempts to limit the term “spool” to only those upon which conventional rolls of construction line are wound or to those which are “circular in cross section.” Stringliner contends that LHC’s proposed construction is indefinite because it is not clear what is intended to be “circular in cross section.” It is Stringliner’s contention that the term “cylindrical” is used to characterize an elongated, hollow structure that may have various cross sectional shapes that define an inner passage, including but not limited to circular, elliptical, rectangular,

and the like. Stringliner further argues that LHC itself admits that the claimed spool is not limited to a “circular” shape, as evidenced by LHC’s reliance on the illustration of non-circular shaped spools used in the prior art. Finally, Stringliner argues that it would be illogical not to consider the spool as a feature of the claimed apparatus, as the spool is referenced repeatedly throughout the claim. Accordingly, Stringliner contends that the term “elongated, hollow, cylindrical spool” should be construed as a tubular body having a first open end and a second open end. [Doc. 35 at 14; Doc. 43 at 8-12].

The specification reveals that the inventors of the present invention sought to avoid the extra step of unwinding construction line from the cardboard or plastic spools on which it was purchased and winding it onto the specialized reels or spools of prior art devices. ‘635 Patent, Col. 1, lines 52-55 (“Since construction line is often purchased rewound around a cardboard or plastic spool, it would have to be unwound from the spool and wound onto the reel, which is a time consuming and sometimes frustrating task.”). Accordingly, the inventors of the ‘635 Patent made it clear that an object of their invention was to be able to outfit the claimed apparatus with conventional rolls of construction line, as opposed to the prior art devices,

which used rolls of line on spools or reels designed for use specifically with the devices. See id. at Col. 2, lines 3-6 (“In other words, rather than outfitting a reel with construction line, as was the conventional prior art approach, a spool of construction line could instead be outfitted with a rotatable reel and handle.”). The specification also makes clear that the inventors viewed a typical “conventional roll of construction line” as one that is “wound onto an elongated, hollow, cylindrical spool that has a longitudinal axis, a first end, a second end, and a hole extending axially along the longitudinal axis from the first end to the second.” Id. at Col. 3, lines 22-28.

LHC argues that by describing the spool as something used with a “conventional roll” of construction line, the inventors confirmed that the ordinary meaning of “spool” is a spool with a circular cross-section, such as a spool used with kite string, thread, or toilet paper. In support of its argument, LHC points to the fact that the only spool shown in the ‘635 Patent illustrations is a spool with a circular cross-section. See id. at Sheets 2-4, Figs. 1-5. Further, LHC cites the reference in the specification to U.S. Patent No. 4,285,477 to Oxendahl [Doc. 39-4] (“Oxendahl ‘477 Patent”), which uses the term “cylindrical” to describe two features of its

design, both of which have circular cross-sections. See id. at Col. 1, lines 43-47 (incorporating by reference the Oxendahl '477 Patent); Oxendahl '477 Patent, Col. 3, lines 43 to Col. 4, line 2; Fig. 8.

The construction of the term “cylindrical” as “circular in cross-section” is supported by the use of this term in other claims in the Patent.

See Phillips, 415 F.3d at 1314 (“Other claims of the patent in question, both asserted and unasserted, can also be valuable sources of enlightenment as to the meaning of a claim term.”). For example, in Claim 23 (a claim not asserted in this case), reference is made to a winding knob feature with “a *round* hole extending longitudinally therethrough to form an inside *cylindrical* surface ....” ‘635 Patent, Col. 12, lines 4-5 (emphasis added). Thus, LHC’s proposed construction of the term “cylindrical” as something being “circular in cross-section” (i.e., round) is consistent with the use of that term in other claims of the Patent.

Stringliner argues that LHC’s proposed construction of “cylindrical” is indefinite because it is unclear whether the term is in reference to the exterior surface of the spool or the inner surface of the spool which defines the opening. “Claims are considered indefinite when they are ‘not amenable to construction or are insolubly ambiguous.... Thus, the



definiteness of claim terms depends on whether those terms can be given any reasonable meaning.” Young v. Lumenis, Inc., 492 F.3d 1336, 1346 (Fed. Cir. 2007) (quoting Datamize, LLC v. Plumtree Software, Inc., 417 F.3d 1342, 1347 (Fed. Cir. 2005)). In determining whether a claim is sufficiently definite, the Court must consider “whether those skilled in the art would understand what is claimed.” Young, 492 F.3d at 1346. Contrary to Stringliner’s argument, the term “cylindrical” is not unclear; the context of the claim language itself makes it clear that the term “cylindrical” is used in reference to the exterior of the spool, and that the inner surface of the spool is defined by a separate claim term. See ‘635 Patent, Col. 9, lines 14-18 (“the roll of construction line is wound onto an elongated, hollow, *cylindrical spool* that has ... a *hole* extending axially along the longitudinal axis from the first end to the second end”). Because the term “cylindrical” is used in reference only to the exterior of the spool, not the interior of the spool, the Court rejects Stringliner’s contention that LHC’s proposed construction of “cylindrical” is indefinite.

Stringliner argues that LHC has admitted that so-called “conventional spools” are not necessarily circular in nature, and in support of this argument, Stringliner cites to various illustrations of non-circular shaped

spools that are referenced in LHC's opening brief [Doc. 39 at 2-5, 19].

These illustrations, however, are not of "conventional spools" but rather are illustrations of various prior art devices. It was these very devices which the inventors of the '635 Patent found lacking because they required winding construction line onto reels or spools designed specifically for the particular device. '635 Patent, Col. 1, lines 47-64. Thus, it is clear that the spools represented in these illustrations of prior art devices do not represent "conventional spools."

The Court agrees with LHC that the "spool" referenced in Claim 1 is not a "part of" the claimed rotatable reel and handle apparatus. The specification makes clear that the claimed apparatus is designed for the outfitting of a spool of construction line. See id. at Col. 2, lines 28-31 ("it is a general objection of this invention to provide apparatus *useable for outfitting a spool* of construction line"); Col. 2, lines 59-62 ("Another general objection of this invention is to provide a line reel on which *spools* rewound with construction line or string *can be removably mounted....*") (emphasis added).

For these reasons, the Court concludes that the term "elongated, hollow, cylindrical spool" means a tube having a first end and a second end

that is elongated and hollow and the exterior of which is circular in cross section. Further, the Court finds that the “spool” is not a part of the claimed rotatable reel and handle apparatus.

#### **4. “shoulder”**

LHC argues that the term “shoulder” as used in the phrase “a first shoulder and a second shoulder adapted to be positioned on opposite sides of the roll of construction line adjacent the respective first end and second end of the spool” should be construed to mean a body “connected to the shank” that extends outwardly from the shank and “abuts” the end of the roll of construction line so that, when the rotatable reel and handle apparatus is outfitted with a roll of construction line on a spool, the shoulder “retains” the roll of construction line and “guides” construction line off and back onto the roll during unwinding and winding. [Doc. 39 at 19].

Stringliner contends that the ordinary meaning of “shoulder” is a protrusion extending radially away from a longitudinal axis of the cylindrical spool. [Doc. 35 at 15]. Further, Stringliner argues that by requiring that the shoulders “retain” and “guide” the construction line, LHC’s proposed construction improperly imports limitations from the specification into the claim. Further, Stringliner takes issue with LHC’s characterization of the

shoulders as “abutting” the end of roll of construction line, and argues that LHC is attempting to provide a narrower definition than the term actually used in the claim, “adjacent.” [Doc. 43 at 13-15].

The Abstract of the ‘635 Patent describes the subject invention as “a reel having two shoulders connected by a shank ... [which] extends longitudinally from one of the shoulders and is releasably fastened to the other shoulder.” ‘635 Patent, Abstract. Figure 2 of the ‘635 Patent shows a perspective view of an exemplary pair of shoulders capable of being used within the present invention (Reference Numerals 202 and 204). Id. at Sheet 2. As illustrated by Figures 2 and 7, the shoulders extend outwardly from the longitudinal axis of the shank. Id. at Sheets 2, 5.

The language of Claim 1 does not make any specific reference to the shoulders guiding or retaining the construction line. The claim describes the function of the apparatus as follows:

[T]he roll of construction line on the spool, when outfitted with the rotatable reel and handle apparatus, can be held in one hand by a user grasping the handle and the construction line can be unwound from the roll or wound back onto the same roll *between the first shoulder and the second shoulder* without releasing the user’s grasp on the handle by spinning the roll, spool, and shoulders in relation to the handle.

Id. at Col. 9, lines 33-41 (emphasis added). The specification describes one of the general objects of the invention as providing an apparatus “with a rotatable handle and *line retaining shoulders*.” Id. at Col. 2, lines 28-30; see also Col. 2, lines 31-36 (“A more specific object of this invention is to provide a more robust rotatable handle structure ... that is capable of maintaining ... *line retaining shoulder alignment* under line loads that are either parallel or perpendicular to the spool axis.”) (emphasis added). The only reference in the specification to the guiding capacity of the shoulders is in reference to the description of the preferred embodiment. The Court must be careful not to import an attribute of the preferred embodiment as a limitation into the claim. See Burke, Inc. v. Bruno Indep. Living Aids, Inc., 183 F.3d 1334, 1341 (Fed. Cir. 1999) (“[A]n attribute of the preferred embodiment cannot be read into the claim as a limitation.”). The language of the claim clearly describes the construction line being wound and unwound “between” the shoulders of the apparatus. ‘635 Patent, Col. 9, lines 38-39. To require the shoulders to “guide” the construction line as it is wound or unwound from the spool would narrow the scope of the claim unnecessarily. Thus, while the specification clearly indicates that the shoulders have line retaining qualities, the specification does not reflect a

clear intent on the part of the inventors to limit the scope of the shoulders to those which guide the roll of construction line on and off the spool.

LHC's construction requiring that the shoulders "abut" the spool is also too narrowly drawn. The claim refers to the shoulders being "adjacent the [opposing ends] of the spool." Id., Col. 9, lines 22-23. The common and ordinary meaning of "adjacent" is "not distant or far off" but also may be defined as "having a common border." Webster's Third New Int'l Dictionary 26 (2002).<sup>5</sup> Thus, the term "adjacent" may be used to describe something that is either near or touching. To "abut," on the other hand, is commonly defined as "to touch." Id. at 8. Thus, the term "adjacent," is broader in scope than the term "abut" and includes the concept of being near.

For the foregoing reasons, the Court concludes that the term "shoulder" as used in the phrase "a first shoulder and a second shoulder adapted to be positioned on opposite sides of the roll of construction line adjacent the respective first end and second end of the spool" means a body connected to the shank that extends outwardly from the longitudinal

---

<sup>5</sup>The Federal Circuit has noted that "dictionaries and treatises can be useful" in ascertaining "the true meaning of language used in the patent claims." Phillips, 415 F.3d at 1318 (quoting in part Markman, 52 F.3d at 980).

axis of the shank and abuts or is near the end of the roll of construction line so that, when the reel and handle apparatus is outfitted with a roll of construction line on a spool, the shoulder retains the roll of construction line.

**5. “connected together in non-rotational relationship to each other and to the spool by an elongated shank”**

LHC contends that a plain reading of Claim 1 shows that the phrase “connected together in non-rotational relationship to each other and to the spool by an elongated shank” means that, when the rotatable reel and handle is outfitted with a roll of construction line on a spool, the first and second shoulder are both (i) attached by an elongated shank to each other, and (ii) attached by an elongated shank to the spool. LHC further contends that this phrase means that the pair of shoulders and the spool are attached in a manner that prevents the pair of shoulders and the spool from rotating with respect to one another. [Doc. 39 at 23-24].

Stringliner, on the other hand, contends that a plain reading of Claim 1 shows that the first shoulder, the second shoulder and the spool are, at most, interconnected by an elongated shank to form a unitary structure where the shoulders are prevented from turning relative to one another.

Stringliner argues that LHC's proposed construction of this phrase improperly replaces the term "connected" with the word "attached," and that it improperly requires that *both* the first shoulder and the second shoulder must be individually "attached" to the spool. Curiously, Stringliner goes on to argue that its own proposed construction may be overly narrow because it requires an interconnection of the shoulders and the spool by an elongated shank, when, in Stringliner's view, the plain language of Claim 1 requires only that the shoulders be connected together and that they be positioned (not connected) in a non-rotational relationship with respect to the spool. [Doc. 35 at 17; Doc. 43 at 15-17].

The Court finds that LHC's proposed construction is generally supported by the plain language of the claim, as well as basic principles of grammar and sentence structure. See In re Hyatt, 708 F.2d 712, 714 (Fed. Cir. 1983) ("A claim must be read in accordance with the precepts of English grammar."). The introductory phrase "connected together in non-rotational relationship" applies to both of the prepositional phrases "to each other" and "to the spool" because of the use of the conjunction "and." According to the basic rules of English grammar, the limitation therefore reads "connected together in non-rotational relationship to each other by



an elongated shank” and “connected together in non-rotational relationship to the spool by an elongated shank.” Stringliner’s argument that the language of the claim requires that the shoulders only be positioned (not connected) in a non-rotational relationship with respect to the spool is simply not supported by the plain language of the claim.

The Court agrees with Stringliner, however, that defining the term “connected” as “attached” would be too limiting. The term “connected” is commonly defined as “joined or linked together,” Webster’s Third New International Dictionary 480 (2002), whereas the term “attached” implies a more permanent, binding relationship, see id. at 140 (defining “attached” as “permanently fixed” and “attach” as “to make fast or join”). As the claim language and specification clearly indicate that the apparatus is designed to be taken apart so that the spool may be mounted on the shank, the Court declines to construe the term “connected” as suggesting any sort of permanent attachment between the shoulders and shank.

Accordingly, the Court construes the phrase “connected together in non-rotational relationship to each other and to the spool by an elongated shank” to mean that, when the rotatable reel and handle is outfitted with a roll of construction line on a spool, the first and second shoulder are both

(i) connected by an elongated shank to each other, and (ii) connected by an elongated shank to the spool. The pair of shoulders and the spool are connected in a manner that prevents the pair of shoulders and the spool from rotating with respect to one another.

## **6. “elongated shank”**

Stringliner proposes that the term “elongated shank” should be construed to mean an elongated, generally straight, shaft-like structure that extends through the cylindrical spool and frictionally engages an interior surface of the cylindrical spool. [Doc. 35 at 18]. LHC does not offer any alternative proposed construction for this term in its briefs, but does argue that Stringliner’s proposed definition of “elongated shank” does not properly take into account Stringliner’s argument to the PTO during the prosecution of the patent application that the shank of the subject invention extends “all the way through the spool.” [Doc. 42 at 20-21].

Under the doctrine of prosecution disclaimer, a patentee is precluded “from recapturing through claim interpretation specific meanings disclaimed during prosecution.” Omega Eng’g, Inc. v. Raytek Corp., 334 F.3d 1314, 1323 (Fed. Cir. 2003). The doctrine is not applicable where the alleged disclaimer is ambiguous; the disavowal of claim scope “must ‘be both clear

and unmistakable' to one of ordinary skill in the art." Elbex Video, Ltd. v. Sensormatic Electronics Corp., 508 F.3d 1366, 1371 (Fed. Cir. 2007) (quoting Omega Eng'g, 334 F.3d at 1326). In the present case, the PTO Examiner initially rejected all of the claims of the application, stating that (1) all claims were rejected as being indefinite under the second paragraph of 35 U.S.C. §112 and (2) Claims 1 and 2 were rejected for double patenting based on the issuance of the earlier '739 Patent. [Office Action dated July 7, 1998, Doc. 39-10, Ex. I-2 at 10, 11]. In response to the double patenting rejection, the inventors argued as follows:

The applicants request the examiner to reconsider the double patenting rejection of claims 1 and 2. In the parent application, U.S. Patent No. 5,664,739, two individual shanks 16, 22 extend toward each other from respective reel cap 12 and mid-shoulder 26 into opposite ends of the spool 42. It was found by the inventors that such a two-shank structure was weak and a little flimsy. *The invention embodiments in the current patent application were developed with one shank (220 in Figures 1-4, 100' in Figure 7, and 124' in Figure 8) that extends all the way through the spool, which makes a more rigid, stable structure.*

[Id. at 18-19] (emphasis added). Thus, in an effort to distinguish the prior art and to circumvent the PTO's finding of double patenting, the inventors

specifically limited the scope of the patent-in-suit to an apparatus with a shank that extends all the way through the spool.

The limitation of “elongated shank” to a shank that extends all the way through the spool also is corroborated by the language of the specification, wherein the inventors described the prior art as being deficient due to “the lack of a shaft extending all the way through the cord spool,” thereby “leav[ing] the end cap subject to being rotated in relation to the midsection or even pulled out of the cord spool by the construction line when the construction line is being unwound or pulled in tension in a direction that is more parallel than perpendicular to the spool axis.” ‘635 Patent, Col. 2, lines 10-15. In light of this deficiency in the prior art, the inventors sought to provide an apparatus with “a more robust rotatable handle structure ... that is capable of maintaining its structural integrity, spool retaining capability, and line retaining shoulder alignment under line loads that are either parallel or perpendicular to the spool axis.” Id. at Col. 2, lines 31-37. The specification further describes the elongated shank as “extend[ing] axially *through* the hole in the spool” and connecting the shoulders positioned on each side of the spool. Id. at Col. 3, lines 31-38. Thus, it is clear from both the prosecution history and the specification that

the inventors intended for the elongated shank of the apparatus to extend all the way through the spool of construction line.

The Court generally agrees with Stringliner that the ordinary and customary meaning of “elongated” is “having a length” and that the term “shank” refers to a shaft-like structure. To define an “elongated shank” as one which frictionally engages the interior of said spool, however, would render meaningless the subsequent phrase in the claim which set forth this same limitation. See Merck, 395 F.3d at 1372. The phrase “frictionally engages” is therefore separately construed below.

For these reasons, the Court concludes that the term “elongated shank” means a generally straight shaft-like structure, having length, that extends all the way through the hole in the spool.

## **7. “hole in the spool”**

Stringliner proposes that the term “hole in the spool” should be construed to mean an opening in the spool capable of receiving an elongated shank. [Doc. 35 at 18]. LHC does not offer any alternative proposed construction for this term in either its opening or responsive brief.

The specification indicates that the hole in the spool is capable of receiving the elongated shank of the apparatus through an axial opening.

'635 Patent, Col. 3, lines 36-39 (“an elongated shank that, when assembled with the roll of construction line and spool, extends axially through the hole in the spool”). The specification also indicates that the hole in the spool extends axially along the longitudinal axis from the first end to the second end of the spool. Id. at Col. 3, lines 22-28 (“the apparatus of the present invention includes rotatable reel and handle apparatus ... wherein the conventional roll of construction line is typified by being wound onto an elongated, hollow, cylindrical spool that has a longitudinal axis, a first end, a second end, and *a hole extending axially along the longitudinal axis from the end to the second end*”) (emphasis added). In the detailed description of the preferred embodiments, the terms “hole” and “opening” are used interchangeably. See id. at Col. 8, lines 19-67. Accordingly, the Court concludes that the phrase “hole in the spool” should be construed to mean an opening in the spool capable of receiving an elongated shank and which extends axially along the longitudinal axis from the first end to the second end of the spool.

#### **8. “frictionally engages”**

LHC argues that the phrase “frictionally engages” means that friction, as opposed to some other undefined “connecting means,” is used to inhibit

movement of the spool outfitted on the claimed apparatus. Thus, LHC proposes that this phrase should be construed to mean that the shank and spool, when outfitted, interconnect in such a way that friction inhibits axial and rotational movement of the spool in relation to the shank, first shoulder and second shoulder that comprise the reel. [Doc. 39 at 24-25].

Conversely, Stringliner contends that the ordinary and common meaning of this phrase is connecting via friction. Stringliner argues that LHC's proposed construction does not utilize the ordinary meaning of the claim terms and improperly attempts to import limitations from the specification into the claim. [Doc. 35 at 19; Doc. 43 at 18-19].

LHC's proposed construction of the phrase "frictionally engages" is supported by the plain language of the patent. Claim 1 provides that the shank connects the two shoulders of the apparatus in a non-rotational relationship to each other and to the spool, and that the shank also "frictionally engages the spool," such that the roll of construction line can be wound or unwound "by spinning the roll, spool, and shoulders in relation to the handle." '635 Patent, Col. 9, lines 24-41. This language indicates that the roll and spool are in a non-rotational relationship with both the shoulders and the shank by virtue of this frictional engagement, and that

the roll, spool, shoulders and shank in turn rotate in relation to the handle. As such, the frictional connection between the shank and the spool inhibits rotational and axial movement of the spool in relation to the shank and the shoulders, and allows rotational movement of the spool, shank, and shoulders in relation to the handle. This interpretation is supported as well by the specification. See id. at Col. 3, lines 6-11 (“Another specific object of this invention is to provide a line reel that includes a handle that can fastened securely to a spool of line or string in a manner that *allows the spool to rotate freely in relation to the handle* for dispensing line or string from the spool and for retrieving line or string onto the spool.”); Col. 5, lines 47-52 (noting that the resilience of the splines on the shank “causes them ... to frictionally engage the inside surface 211 of the spool 210 to resist both *rotational and axial movement* of the spool 210 in relation to the shank 220”) (emphasis added).

Stringliner’s proposed construction of “connecting via friction,” while technically not an inaccurate characterization of “frictionally engaging,” does little to clarify what the term actually means within the context of this claim.



For these reasons, the Court concludes that “frictionally engages” means that the shank and spool, when outfitted, interconnect in such a way that friction inhibits rotational and axial movement of the spool in relation to the shank, first shoulder and second shoulder that comprise the reel.

## **9. “elongated handle”**

Stringliner proposes that the term “elongated handle” simply means a handle having an elongated structure that rotates relative to the elongated shank and the pair of shoulders. [Doc. 35 at 20]. LHC does not address the term “elongated handle” in either of its briefs.

The Court concludes that Stringliner’s proposed construction of this term is supported by the specification. According to the specification, when the shank frictionally engages the spool, the roll of construction line can be wound or unwound “by spinning the roll, spool, and shoulders in relation to the handle.” ‘635 Patent, Col. 9, lines 40-41. Further, Figure 2 of the Patent illustrates that the handle has a length and thus can be classified as being elongated. ‘635 Patent, Sheet 2, Fig. 2. Accordingly, the Court finds that the term “elongated handle” means a structure, having

length, that rotates relative to the elongated shank and the pair of shoulders of the apparatus.

**10. “the construction line can be unwound from the roll or wound back onto the same roll between the first shoulder and the second shoulder”**

Stringliner contends that the phrase “the construction line can be unwound from the roll or wound back onto the same roll between the first shoulder and the second shoulder” should be construed to mean that the construction line is capable of being unwound from or wound back onto the roll of construction line in a location anywhere between the first shoulder and the second shoulder. Stringliner specifically argues that as expressed in Claim 1 and as illustrated in Figure 4 of the Patent’s illustrations, there is no requirement that the construction line be guided or otherwise physically engaged by either of the shoulders. [Doc. 35 at 21]. LHC does not offer a proposed construction for this phrase, and therefore, Stringliner’s proposed construction is uncontested.

The language of the claim clearly describes the construction line being wound and unwound “between” the shoulders of the apparatus. ‘635 Patent, Col. 9, lines 38-39. As discussed earlier in construing the term “shoulder,” to require the shoulders to “guide” the construction line as it is

wound or unwound from the spool would narrow the scope of the claim unnecessarily. For the reasons discussed supra, the Court concludes that the phrase “the construction line can be unwound from the roll or wound back onto the same roll between the first shoulder and the second shoulder” should be construed to mean that the construction line is capable of being unwound from or wound back onto the roll of construction line in a location anywhere between the first shoulder and the second shoulder.

## **B. Claim 2**

Claim 2 of the ‘635 Patent, with the disputed claim language highlighted in bold, reads as follows:

2. The rotatable reel and handle apparatus of claim 1, **wherein the shank extends from said first shoulder through said hole in the spool to said second shoulder, and wherein said second shoulder is releasably connected to said shank.**

‘635 Patent, Col. 9, lines 42-45 (emphasis added).

1. **“wherein the shank extends from said first shoulder through said hole in the spool to said second shoulder”**

Stringliner contends that the common and ordinary meaning of the phrase “wherein the shank extends from said first shoulder through said hole in the spool to said second shoulder” is that the shank extends from

the first shoulder through the spool and reaches to the second shoulder, as illustrated by Figure 4 of the patent. [Doc. 35 at 21-22]. LHC does not address the construction of this phrase as a whole in either its opening or responsive brief.

Applying the construction of each of these terms which the Court found with respect to Claim 1, and reading this phrase in context of the entire claim, the Court concludes that the plain language of the phrase “wherein the shank extends from said first shoulder through said hole in the spool to said second shoulder” means that a straight, shaft-like structure extends all the way through the hole in the spool and connects the first shoulder and second shoulder of the apparatus.

**2. “wherein said second shoulder is releasably connected to said shank”**

Stringliner contends that the common and ordinary meaning of the phrase “wherein said second shoulder is releasably connected to said shank” is that the second shoulder is connected to the shank, but may be removed from the shank. In support of this construction, Stringliner cites Figure 4 of the Patent, which illustrates the second shoulder being connected to the shank and Figure 2, which illustrates the second shoulder

being removed from the shank. [Doc. 35 at 22]. LHC does not address the construction of this phrase in either of its briefs.

As discussed supra, the plain language of Claim 2 requires that the second shoulder be connected to the shank and thus to the first shoulder. See '635 Patent, Col. 8, lines 55-63. The plain language of Claim 2 also requires that the second shoulder of the apparatus be capable of being removed (i.e., "releasably connected") from the shank. This interpretation is supported not only by the plain language of the claim, but also the specification. See '635 Patent, Abstract ("The shank extends longitudinally from one of the shoulders and is releasably fastened to the other shoulder"); Col. 4, lines 2-7 ("Alternate embodiments have the main handle mounted on the first shoulder or the second shoulder with the shank releasably connected to shoulder [sic] on which the handle is mounted or to the shoulder on the opposite side of the reel from the shoulder on which the handle is mounted"). Accordingly, the Court concludes that the phrase "wherein said second shoulder is releasably connected to said shank" means that the second shoulder is connected to the shank, but may be removed from the shank.

### C. Claim 10

Claim 10 of the '635 Patent, with the disputed claim terms highlighted in bold, reads as follows:

10. The rotatable reel and handle apparatus of claim 1, wherein the shank extends from said first shoulder through said hole in the spool and through said second shoulder in **a keyed manner** and for a distance beyond said second shoulder to form **a spindle, said handle being mounted on said spindle in rotational relation to said shank.**

'635 Patent, Col. 10, lines 11-16 (emphasis added).

#### 1. “keyed manner”

Stringliner contends that the term “keyed manner” has a common and ordinary meaning of a configuration that prevents rotation of connected parts with respect to one another. It cites Figure 2 of the Patent as illustrating a configuration of the second shoulder that receives the elongated shank in a non-rotational manner. [Doc. 35 at 22-23]. LHC argues that the term “keyed manner” means that the shank extends through a specifically-shaped opening in the second shoulder (“a keyed hole”) that includes a plurality of specifically-shaped passage ways (“key ways”) which matingly receive correspondingly-shaped protrusions on the shank in order to prevent rotational movement between the second

shoulder and the shank by creating an obstruction that prevents such rotation, such as a key in a lock. [Doc. 39 at 25 n.62; Doc. 42 at 17-19].

The specification reveals that the purpose of the “keyed manner” is to prevent rotational movement between the second shoulder and the shank. See ‘635 Patent, Col. 3, lines 51-55 (“In a preferred embodiment, the shank extends from the first shoulder through the hole in the spool, slidably through the second shoulder *in a keyed manner to prevent rotational movement between the second shoulder and the shank*”); Col. 5, lines 14-17 (“Another feature of this invention is the extension of the shank 220 through the shoulder 204 *in a keyed manner that prevents rotation of shoulder 204 in relation to shank 220*”) (emphasis added). In a description of the preferred embodiment, the specification describes the “keyed hole” of the second shoulder as being “shaped and sized with a plurality of key ways 260, 262, 266 to matingly receive the splines 226, 228, 230, 232 of the shank 220,” and that these key ways “interact with mating splines 226, 228, 230, 232 of shank 220” to prevent rotational movement of the spool of construction line in relation to the shank. Id. at Col. 5, line 65 to Col. 6, line 2. Based upon the description set forth in the specification, the Court concludes that the term “keyed manner” means that the shank extends

through a specifically-shaped opening in the second shoulder (“a keyed hole”) that includes a plurality of specifically-shaped passage ways (“key ways”) which matingly receive correspondingly-shaped protrusions on the shank in order to prevent rotational movement between the second shoulder and the shank by creating an obstruction that prevents such rotation.

## **2. “spindle”**

Stringliner contends that the term “spindle” should be construed to mean a portion of the shank extending past the second shoulder. [Doc. 35 at 23]. LHC does not address this term in either of its briefs.

The Court agrees with Stringliner that the term “spindle,” as used in the context of this claim, refers to a longitudinal portion of the shank extending beyond the second shoulder. See ‘635 Patent, Abstract (referring to handle being mounted on “a longitudinal extension of the shank”). Accordingly, the Court concludes that the term “spindle” should be construed to mean a longitudinal portion of the shank extending beyond the second shoulder.



**3. “said handle being mounted on said spindle in rotational relation to said shank”**

Stringliner contends that the common and ordinary meaning of the phrase “said handle being mounted on said spindle in rotational relation to said shank” is that of a handle rotatably connected to the spindle. [Doc. 35 at 23]. LHC does not address this phrase in either of its briefs.

The specification provides that one of the specific objects of the present invention “is to provide a line reel that includes a handle that can be *fastened securely* to a spool of line or string in a manner that allows the spool to rotate freely in relation to the handle ....” ‘635 Patent, Col. 3, lines 6-11 (emphasis added); Abstract (“A handle is mounted rotatably on either a longitudinal extension of the shank or one of the shoulders.”). Based upon the description set forth in the specification, the definition of the terms “handle,” “spindle,” and “shank” previously set forth in this opinion, as well as the plain language of the claim itself, the Court concludes the phrase “said handle mounted on spindle in rotational relation to shank” means that the handle is fastened securely to the spindle so that the handle can rotate in relation to the shank.

#### D. Claim 14

Claim 14 of the '635 Patent, with the disputed claim terms highlighted in bold, reads as follows:

14. The rotatable reel and handle apparatus of claim 10, including **resiliently bendable barbs** on the shank that extend radially outward from the shank to engage the inside surface of the spool.

'635 Patent, Col. 10, lines 27-30 (emphasis added). Stringliner contends that the term “resiliently bendable barbs” should be construed to mean a plurality of resilient projections extending from the central portion of the shank radially outward which engage the spool to prevent rotational movement between the spool, the shank and shoulders. Stringliner argues that Figure 4 of the Patent best illustrates resiliently bendable barbs. [Doc. 35 at 24]. LHC does not offer a proposed construction for this term in either of its briefs.

The specification indicates that the purpose of the barbs described in Claim 14 is to inhibit rotational movement of the spool in relation to the shank and the shoulders. See '635 Patent, Col. 3, lines 62-64 (“Barbs on the shank and wedges on the inside surfaces of the shoulders engage the spool to inhibit rotational movement between the spool and the shank and shoulders.”). In the description of the preferred embodiments, the

specification describes the barbs as being “yieldably resistant to forces that depress them toward the longitudinal axis 221 of the shank 220,” and that this “yieldable resistance” causes the barbs “to frictionally engage the inside surface 211 of the spool 210 to resist both rotational and axial movement of the spool 210 in relation to the shank 220.” Id. at Col. 5, lines 38-52. Based upon the description of this limitation in the specification, the Court concludes that the term “resiliently bendable barbs” should be construed to mean a plurality of protrusions extending radially outward from the central portion of the shank which frictionally engage the inside surface of the spool to resist rotational and axial movement of the spool in relation to the shank and shoulders.

#### **E. Claim 15**

Claim 15 of the ‘635 Patent, with the disputed claim term highlighted in bold, reads as follows:

15. The rotatable reel and handle apparatus of claim 10, including **a wedge** extending axially from the first shoulder onto engagement with the first end of the spool.

‘635 Patent, Col. 10, lines 31-33 (emphasis added). Stringliner proposes that the term “wedge” be construed as a tapered projection extending axially from the first shoulder and engaging the first end of the spool.

Stringliner cites Figure 4 of the Patent as illustrating a pair of wedges (252, 254) extending axially from the first shoulder (202) and engaging the first end of the spool [Doc. 35 at 24]. LHC does not propose a construction of this term in either of its briefs.

The specification provides that the purpose of the wedges described in Claim 15 is to inhibit rotational movement of the spool in relation to the reel and handle apparatus. See '635 Patent, Col. 3, lines 62-64 ("Barbs on the shank and wedges on the inside surfaces of the shoulders engage the spool to inhibit rotational movement between the spool and the shank and shoulders."). The specification reveals that these wedges protrude axially inward from the surface of the shoulders and radially outward from the splines of the shank in order to engage the ends of the spool. See id. at Col. 5, lines 56-62 ("A pair of tetrahedron shaped wedges 252, 254 protrude axially inward from the surface 224 and radially outward from the splines 226, 230 to engage the end 250 of spool 210 to further inhibit rotational movement of the spool 210 and roll 205 of construction line 206 in relation to the shank 200 and shoulder 202."); Col. 6, lines 3-7 ("A pair of sharp, tetrahedron shaped wedges 273, 274 protrude from the inside surface 268 of shoulder 204 into engagement with the end 270 of spool

210 to resist rotational movement of the spool 210 in relation to the shoulder 204.”).

Based on the description set forth in the specification, the Court concludes that the term “wedge” should be construed to mean a protrusion extending inwardly from the inside surface of the shoulders and radially outward from the splines of the shank in order to engage the ends of the spool so as to inhibit rotational movement of the spool in relation to the shank and shoulders of the apparatus.

#### **F. Claim 17**

Claim 17 of the ‘635 Patent, with the disputed claim term highlighted in bold, reads as follows:

17. The rotatable reel and handle apparatus of claim 10, wherein the shank has a plurality of radially outward extending **splines**, said second shoulder has a **keyed hole** extending through the second shoulder with a plurality of radially extending keyways that are matched in size and shape to said splines.

‘635 Patent, Col. 10, lines 37-41 (emphasis added).

##### **1. “splines”**

Stringliner proposes that the common and ordinary meaning of the term “splines” is a plurality of resilient projections extending from the

central portion of the shank outwardly. Stringliner cites to Figure 5 of the Patent as illustrating the splines (226, 228, 230, 232) of the apparatus. [Doc. 25 at 25]. LHC does not set forth a proposed construction for this term in either of its briefs.

In its description of the preferred embodiments, the specification describes the “splines” as “extend[ing] radially outward from the longitudinal axis of the shank,” ‘635 Patent, Col. 5, lines 25-28, and that each spline “has a plurality of resilient barbs ... that protrude outwardly from respective splines ...,” *id.* at Col. 5, lines 38-52. Based upon this description, the Court concludes that the term “splines” refers to a plurality of resilient projections extending radially outward from the longitudinal axis of the shank.

## **2. “keyed hole”**

Stringliner contends that the term “keyed hole” should be construed to mean a hole having a plurality of keyways formed therein for accommodating the splines from the shank, and being of a size and shape to match the splines. Stringliner relies upon Figure 2 of the Patent as illustrating an exemplary keyed hole and Figure 5 as illustrating the splines

positioned within the keyed hole. [Doc. 35 at 25]. LHC does not offer a proposed construction of this term in either of its briefs.

The specification describes the “keyed hole” as illustrated in Figures 2, 4, and 5, as “extending axially through the core housing” and being “shaped and sized with a plurality of key ways ... to matingly receive the splines ... of the shank ....” ‘635 Patent, Col. 5, line 63, Col. 6, line 1. The specification further provides that the key ways interact with the mating splines in order to prevent rotational movement of the spool in relation to the shank. See id. at Col. 6, lines 7-12. Accordingly, based upon the specification, the Court concludes that the term “keyed hole” should be construed to mean a hole having a plurality of keyways formed therein for accommodating the splines from the shank, and being of a size and shape to match the splines, the purpose of which is to prevent rotational movement of the spool in relation to the shank.

## **V. ORDER**

**IT IS, THEREFORE, ORDERED** that the Plaintiff’s Motion for Claim Construction [Doc. 34] and the Defendant’s Motion for Claim Construction

[Doc. 37] are **GRANTED** to the extent that the disputed claim terms of U.S. Patent No. 5,927,635 are hereby construed as follows:

- A. The terms “rotatable reel and handle apparatus” and “reel” are merely part of the preamble language of Claims 1, 2, 10, 14, 15, and 17; therefore, the construction of these terms is not relevant to the proper construction of these Claims.
- B. The term “roll of construction line” is construed as a length of string or line wound into a roll. The roll of construction line is not a part of the rotatable reel and handle apparatus.
- C. The term “elongated, hollow, cylindrical spool” is construed as a tube having a first end and a second end that is elongated and hollow and the exterior of which is circular in cross section. The “spool” is not a part of the claimed rotatable reel and handle apparatus.
- D. The term “shoulder” as used in the phrase “a first shoulder and a second shoulder adapted to be positioned on opposite sides of the roll of construction line adjacent the respective first end and second end of the spool” means a body connected to the shank that extends outwardly from the



longitudinal axis of the shank and abuts or is near the end of the roll of construction line so that, when the reel and handle apparatus is outfitted with a roll of construction line on a spool, the shoulder retains the roll of construction line.

E. The phrase “connected together in non-rotational relationship to each other and to the spool by an elongated shank” is construed to mean that, when the rotatable reel and handle is outfitted with a roll of construction line on a spool, the first and second shoulder are both (i) connected by an elongated shank to each other, and (ii) connected by an elongated shank to the spool. The pair of shoulders and the spool are connected in a manner that prevents the pair of shoulders and the spool from rotating with respect to one another.

F. The term “elongated shank” means a generally straight shaft-like structure, having length, that extends all the way through the spool.

G. The term “hole in the spool” is construed to mean an opening in the spool capable of receiving an elongated shank

and which extends axially along the longitudinal axis from the first end to the second end of the spool.

H. The term “frictionally engages” is construed to mean that the shank and spool, when outfitted, interconnect in such a way that friction inhibits rotational and axial movement of the spool in relation to the shank, first shoulder and second shoulder that comprise the reel.

I. The term “elongated handle” contained in Claim 1 is construed as a structure, having length, that rotates relative to the elongated shank and the pair of shoulders of the apparatus.

J. The phrase “the construction line can be unwound from the roll or wound back onto the same roll between the first shoulder and the second shoulder” contained in Claim 1 is construed to mean that the construction line is capable of being unwound from or wound back onto the roll of construction line in a location anywhere between the first shoulder and the second shoulder.

K. The phrase “wherein the shank extends from said first shoulder through said hole in the spool to said second

shoulder” is construed to mean that a straight, shaft-like structure extends all the way through the hole in the spool and connects the first shoulder and second shoulder of the apparatus.

L. The phrase “wherein said second shoulder is releasably connected to said shank” is construed to mean that the second shoulder is connected to the shank, but may be removed from the shank.

M. The term “keyed manner” is construed to mean that the shank extends through a specifically-shaped opening in the second shoulder (“a keyed hole”) that includes a plurality of specifically-shaped passage ways (“key ways”) which matingly receive correspondingly-shaped protrusions on the shank in order to prevent rotational movement between the second shoulder and the shank by creating an obstruction that prevents such rotation.

N. The term “spindle” is construed to mean a longitudinal portion of the shank extending beyond the second shoulder.

O. The phrase “said handle mounted on spindle in rotational relation to shank” is construed to mean that the handle is fastened securely to the spindle so that the handle can rotate in relation to the shank.

P. The term “resiliently bendable barbs” is construed to mean a plurality of protrusions extending radially outward from the central portion of the shank which frictionally engage the inside surface of the spool to resist rotational and axial movement of the spool in relation to the shank and shoulders.

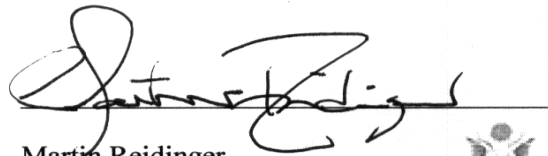
Q. The term “wedge” is construed to mean a protrusion extending inwardly from the inside surface of the shoulders and radially outward from the splines of the shank in order to engage the ends of the spool so as to inhibit rotational movement of the spool in relation to the shank and shoulders of the apparatus.

R. The term “splines” is construed to mean a plurality of resilient projections extending radially outward from the longitudinal axis of the shank.

S. The term “keyed hole” should be construed to mean a hole having a plurality of keyways formed therein for accommodating the splines from the shank, and being of a size and shape to match the splines, the purpose of which is to prevent rotational movement of the spool in relation to the shank.

**IT IS SO ORDERED.**

Signed: September 30, 2008

  
Martin Reidinger  
United States District Judge

